

MISCELLANEOUS NOTES

PLANT	FAMILY
1). <i>Heliotropium eichwaldi</i>	BORAGINACEAE
2). <i>Solanum nigrum</i>	SOLANACEAE
3). <i>S. melongena</i>	"
4). <i>S. tuberosum</i>	"
5). <i>Datura</i> sp.	"
6). <i>Saccharum officinarum</i>	GRAMINEAE
7). <i>Arundo donax</i>	"
8). <i>Lagenaria vulgaris</i>	CUCURBITACEAE
9). <i>Momordica charantia</i>	"
10). <i>Ricinus communis</i>	EUPHORBIACEAE

A preliminary observation on the feeding potential reveals that this grasshopper may be considered as a pest of some important plants in this part of the country. Among the food plants enumerated above, the plants belonging to the family Solanaceae were preferred by the grasshopper to other plants. The grasshopper could not be reared in the laboratory due to some unknown microbial infection in the collected specimens.

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24. STUDIES ON THE WATER BUGS (HEMIPTERA: HETEROPTERA)
OF CORBETT NATIONAL PARK

The Corbett National Park in Uttar Pradesh occupies an area of 525 sq km in the foothills of the Himalayas. The collections were made by survey parties of Northern Regional Station, Zoological Survey of India, Dehra Dun, from small pools with fresh running water by the sides of the river Ramganga and its tributaries. These pools apparently had no water plants and were seldom more than a foot in depth. The collecting stations within the Corbett National Park were; (Districts—Nainital and Pauri Garhwal).

District Naini Tal: Bij Rani, Jamnagarwar, Malani, Mohan and Sultan.

District Pauri Garhwal: Boxar, Dhikala, Dhulwasote, Gairal, Kanda, Paterpani and Sarpduli.

Eight species of water bugs belonging to the families, Hydrometridae, Naucoridae and Nepidae have been recorded from the park. Most of these agree fairly closely with the descrip-

tions by Distant (1903, 1906), but in a few cases marked differences have been observed and noted.

Family HYDROMETRIDAE

Subfamily Gerrinae

Gerris sahlbergi (Distant)

Material examined: Bij Rani (4).

Agrees with the published description except in the following; Antennae yellowish-brown; eyes bottle-green; lateral margins of the body silvery-grey; pronotum; notum and postnotum brownish-yellow.

Known distribution: Ladak, Leh, Gramphu and Kulti Nal.

Metrocoris stali (Dohrn.)

Material examined: Dhikala (3), Dhulwasote (2), Malani (6), Mohan (6), Sarpduli (37) and Sultan (1).

Antennae light brownish-yellow; in some specimens both longitudinal black spot of the

posterior area of the pronotum meet together and form a semicircular line. Hemelytra brown. *Known distribution*: Bombay, Nilgiri Hills and Sri Lanka.

Ptilomera laticaudata (Hardwicke)

Material examined: Bij Rani (18); Dhulwasote (5); Gairal (60); Malani (18); Mohan (46); and Sarpduli (40).

Agrees with the published description except that a narrow black line is present on the lateral sides of the body.

Known distribution: Dehra Dun, Kalsi, Nilgiri Hills, Sri Lanka, Burma and Malaya.

Family NAUCORIDAE

Subfamily Laccocorinae

Heleocoris ovatus Montandon

Material examined: Bij Rani (25); Boxar (2); Gairal (4); Dhulwasot (3); Malani (3) and Sultan (1).

Rostrum brownish-yellow, hemelytra black and yellow laterally.

Known distribution: Dehra Dun, Hoshiarpur and Hamirpur.

Heleocoris obliquatus Spin.

Material examined: Bij Rani (14); and Dhikala (2).

Rostrum yellow; eyes black; scutellum dark-brown.

Known distribution: Bombay.

Family NEPIDAE

Laccotrepes ruber (Linn.)

Material examined: Bij Rani (10); Boxar (3);

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Dhela (1); Dhikala (1); Gairal (2); Jamnagawar (2); Malani (1); and Paterpani (19).

Known distribution: Dehra Dun, Bombay, Calcutta, Kashmir, Kangra valley, Naga Hills, North Khasi Hills, Burma, Borneo, Sri Lanka, China, Formosa and Japan.

Ranatra filiformis (Fabricius)

Material examined: Paterpani (2).

Rostrum yellow with black tip; pronotum light brownish-yellow and anterior femora pale-yellow.

Known distribution: Bihar.

Ranatra veripes (Stal.)

Material examined: Dhikala (1); Kanda (1); Paterpani (1); and Sultan (2).

Eyes black; rostrum and hemelytra brownish-yellow.

Known distribution: Bengal, Dehra Dun, Burma, Sri Lanka and Nepal.

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REFERENCES

- DISTANT, W. L. (1903): The Fauna of British India, Rhynchota Vol. 2, part—1 x + 503 pp. Taylor and Francis, London.
- (1906): The Fauna of British India, Rhynchota Vol. 3, xix + 503 pp. Taylor and Francis, London.

25. ON AGGRESSIVENESS IN THE MALES OF BROWN CRICKET, *GRYLLODES SIGILLATUS* WALKER (ORTHOPTERA: GRYLLOIDAE)

Alexander (1961)¹ described aggressiveness as a sequel of sexual behaviour in field crickets. While working on the sexual behaviour of the common brown cricket, *Grylloides sigillatus*, we were able to record the following observations.

When females are scarce, males become aggressive in order to secure the females and fighting males back up, and lash and kick each other with their hind legs. The fight generally lasts about 10 minutes. Meanwhile the female remains hidden. If the fight is prolonged both become more fierce and aggressive, and after about 15 minutes become exhausted. The fight is interrupted occasionally with intervals lasting about five seconds.

As soon as one of the males becomes in-

active, the other takes the opportunity of nibbling or even chopping off the antennae of the rival cricket and subduing it. At times, the femur may be chewed and with this deformity the already mutilated male runs and is chased by the winner.

During such a fight over a female, the males invariably stridulate and grapple each other. Subsequently the winning male mates.

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¹ALEXANDER, R. D. (1961): Aggressiveness, territoriality and sexual behaviour in field crickets (Orthoptera: Gryllidae). *Behaviour*. 17:130-223.